

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1 - 3. (Cancelled)

4. (Previously presented) A method of manufacturing silver nanopyrramids having a desired shape and size, the method comprising:

obtaining a solution of silver nitrate in ethylene glycol,

obtaining a solution of poly(vinyl pyrrolidone) in ethylene glycol;

selecting reaction conditions to yield a silver nanopyramid having a desired shape and size, wherein the reaction conditions comprise a silver nitrate concentration, a poly(vinyl pyrrolidone) concentration, a reaction temperature and a growth time; and

combining the solution of silver nitrate in ethylene glycol and the solution of poly(vinyl pyrrolidone) in ethylene glycol together, and allowing a reaction to occur at the reaction temperature over the growth time.

5. (Cancelled)

6. (Currently amended) The method of claim ~~[[5]]~~ 4, wherein the method further comprises separating nanopyrramids having the desired shape and size from nanostructures of other shapes and sizes.

7. (Previously presented) The method of claim 4, wherein the solution of silver nitrate in ethylene glycol and the solution of poly(vinyl pyrrolidone) in ethylene glycol are combined simultaneously with a separate volume of ethylene glycol.

8. (Cancelled)

9. (Cancelled)

10. (Currently amended) The method of claim ~~[[9]]~~ 4, wherein the reaction temperature is ~~approximately~~ 100° C and the growth time is ~~approximately~~ 5 hours.

11. (Cancelled)

12. (Currently amended) A method of manufacturing silver nanocubes comprising:

preparing a solution of silver nitrate in ethylene glycol, wherein the concentration of silver nitrate ranges from ~~about~~ 0.1 mol/dm<sup>3</sup> to ~~about~~ 0.3 mol/dm<sup>3</sup>;

preparing a solution of poly(vinyl pyrrolidone) in ethylene glycol, wherein the concentration and amount of poly(vinyl pyrrolidone) solution is sufficient to provide a ratio of poly(vinyl pyrrolidone) to silver nitrate ranging from ~~about~~ 1.5 to ~~about~~ 3; and

combining the silver nitrate solution and poly(vinyl pyrrolidone) solution and allowing the mixture to react ~~at a temperature ranging from about 155° C to about 175° C~~ for a time ranging from ~~about~~ 10 minutes to ~~about~~ 60 minutes.

13. (Cancelled)

14. (Original) The method of claim 12 where the poly(vinyl pyrrolidone) has a molecular weight of about 55,000.

15 - 46. (Cancelled)

47. (Previously presented) A method of manufacturing silver nanowires having a desired shape and size, the method comprising:

obtaining a solution of silver nitrate in a solvent;

obtaining a solution of poly(vinyl pyrrolidone) in a solvent;

selecting at least one reaction condition to yield a silver nanowire having a desired shape and size;

combining the solution of silver nitrate in solvent and the solution of poly(vinyl pyrrolidone) in solvent together; and

allowing a reaction to occur at a reaction temperature over a growth time.

48. (Currently amended) The method of claim 47, wherein the solution of silver nitrate in solvent has a concentration of less than about 0.1 mol/dm<sup>3</sup> ranging from approximately 0.1 mol/dm<sup>3</sup> to approximately 0.3 mol/dm<sup>3</sup>;

~~wherein the reaction temperature ranges from approximately 100° C to approximately 190° C, and the growth time ranges from approximately 60 minutes to approximately 5 hours; and~~

~~wherein the concentration of poly(vinyl pyrrolidone) relative to the concentration of silver nitrate is at a molar ratio ranging from approximately 1 to approximately 10.~~

49. (Currently amended) The method of claim 47, wherein ~~the solution of silver nitrate in solvent has a silver nitrate concentration of approximately 0.085 mol/dm<sup>3</sup> and the reaction temperature is approximately 160° C[[,]] and the growth time is approximately 40 minutes.~~

50. (Currently amended) The method of claim 47, wherein ~~the reaction temperature ranges from approximately 100° C to approximately 190° C and the growth time ranges from 10 minutes to approximately 60 minutes to approximately 5 hours.~~

51. (Previously presented) A method of manufacturing silver nanowires the method comprising:

obtaining a solution of silver nitrate in solvent,

obtaining a solution of poly(vinyl pyrrolidone) in solvent;

selecting reaction conditions to yield a silver nanowire, wherein the reaction conditions comprise a silver nitrate concentration, a poly(vinyl pyrrolidone) concentration, a reaction temperature and a growth time; and

combining the solution of silver nitrate in solvent and the solution of poly(vinyl pyrrolidone) in solvent together, and allowing a reaction to occur at the reaction temperature over the growth time to synthesize silver nanowires.

52. (Currently amended) The method of claim 51 wherein ~~the silver nanowires have an aspect ratio of at least 10:1~~ the solution of silver nitrate in solvent has a concentration of less than about 0.1 mol/dm<sup>3</sup>.

53. (Currently amended) The method of claim 51 wherein ~~the silver nanowires have a pentagonal crosssection~~ the reaction temperature is 160° C.

54. (New) The method of claim 51 wherein the growth time ranges from 10 minutes to 60 minutes.